

Report of ecology and protected species surveys of buildings and land at Church Cottage, Carlton, Leicestershire



Tim Smith
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1 Introduction

Tim Smith, a freelance ecologist, has been commissioned by AR Demolition Ltd, to carry out ecology and protected species surveys of buildings and land at Church Cottage, in Carlton, in Leicestershire, in connection with a proposed development. This text and the accompanying photographs and plans comprise the ecology and protected species survey report.

Tim Smith has a BSc (Hons) Ecology from Lancaster University and he has 30 years' experience of working in the ecology and nature conservation fields, with Local Authorities, Statutory Nature Conservation Bodies, Voluntary Nature Conservation Bodies and Ecological Consultancies. He is a freelance ecologist, based in Lincolnshire.

2 Survey methods

A walk-over survey of the land of the site, and land adjacent to the site where access was possible, was undertaken on 22 July 2022 by Tim Smith. Habitats were recorded and mapped; plants were recorded (including searching for invasive alien species); and use of the site by, or the potential for use by, protected species was searched for. The exterior of the buildings on the site was inspected on 22 July 2022 by Tim Smith. Also on this date, the roof void of Church Cottage was inspected by Tim Smith using a loft hatch in the first floor landing for access, and the roof void of the northern part of the offices was inspected, using a hatch in a ground floor storeroom for access. Photographs were taken.

There were no significant constraints to the efficiency of the survey of the land and buildings exteriors. A constraint to the survey of the roof void of Church Cottage was that only the western two-thirds was able to be accessed, with access to the eastern one-third prevented by a brick fire wall and the absence of a loft hatch in the ceiling of the bedroom at the eastern end of the house. Also, although access to the roof void of the office was possible, the felt underlining to the roof tiles meant that it was not possible to inspect the space between the tiles and underlining.

Reference was made to the National Biodiversity Network (NBN) and the MAGIC websites for existing ecology records for the site and immediate area. A consultation was held with the Leicestershire & Rutland Environment Records Centre (LRERC) for any existing protected species records they held for the site and a search area of c1km radius from the site centre.

Another source consulted was a report on the building condition of Church Cottage, which was undertaken in early 2022 by Sansom Hamilton & Co, on behalf of the owner.

3 Site description

3.1 Location and adjacent land

Church Cottage (number 38 Main Street) stands on the south side of the road in the middle of the village of Carlton, in Leicestershire, to the north of Market Bosworth. The grid reference is SK 397 050. Behind (to the south) of Church Cottage there is the offices and hardstandings part of the site. A location plan is given in Appendix 1.

The land adjacent to the west is houses and gardens of the village, which are also to the east of the site. To the north of the site there is Main Street beyond which are houses and gardens, a horse paddock and barns. To the south there are offices and hardstandings, with landscaping shrub beds.

3.2 Site habitats and plants

The site comprises Church Cottage, part of a separate office building, hardstandings, landscaping shrubs and the garden of Church Cottage. A sketch habitat map is given in Appendix 2.

Boundaries

The western boundary of the site runs undefined across hardstandings. The northern boundary of the site is the front of Church Cottage which is right upon the pavement of Main Street. The eastern boundary is partly wooden fencing on brick plinths and partly brick walls. The southern boundary runs across hardstandings.



Boundary across hardstanding



Wooden fence boundary

The body of the site

The site comprises Church Cottage, part of a separate office building, hardstandings, landscaping shrubs and the garden of Church Cottage.

Church Cottage is a detached two storey dwelling. Behind is a small garden with slabs, gravel and lawn, and a tank, which is defined by a brick wall and tall wooden fences.



Garden of Church Cottage



Garden of Church Cottage

The western aspect of Church Cottage is mostly painted stone, with some painted brick and exposed brick and stone foundations at the base. There are no windows. There is some pipework and a truncated chimney stack. The eastern aspect has painted stone and two ground floor uPVC windows.



Church Cottage western aspect



Church Cottage eastern aspect

The northern aspect of Church Cottage has a front door accessed from the pavement by a few steps. There are three uPVC windows on the ground floor and three on the first floor. There are two downpipes and the walls are painted stone with bare stone foundations at the base.

The southern aspect has a back door, and a small uPVC window on the ground floor with three windows on the first floor. There are two downpipes and the walls are painted stone with bare brick and stone foundations at the base. There is a wall tie near the back door.

The roof is pitched and made of clay tiles. Some tiles on each of the north and south elevation have slipped giving rise to numerous gaps. The tiles are not underlined and inspection of the roof void shows that there are many chinks of light which arise from gaps between the tiles. There is a truncated bare brick chimney stack at the western end, with lead flashing, and an intact taller bare brick chimney stack near the eastern end, also with lead flashing.



Church Cottage north aspect



Church Cottage south aspect



Northern aspect of roof



Southern aspect of roof

The part of the roof void of Church Cottage which was able to be inspected (the western two-thirds) has a thin layer of old insulation, and this and the exposed roof timbers are covered in a layer of fine dusty debris and there are extensive cobwebs.



Church Cottage roof void



Church Cottage roof void



Church Cottage roof void



Church Cottage roof void showing gaps between tiles

The part of the in-use offices which is included within the site is roughly the northern third, with the dividing line being marked by a chimney and internal wall.

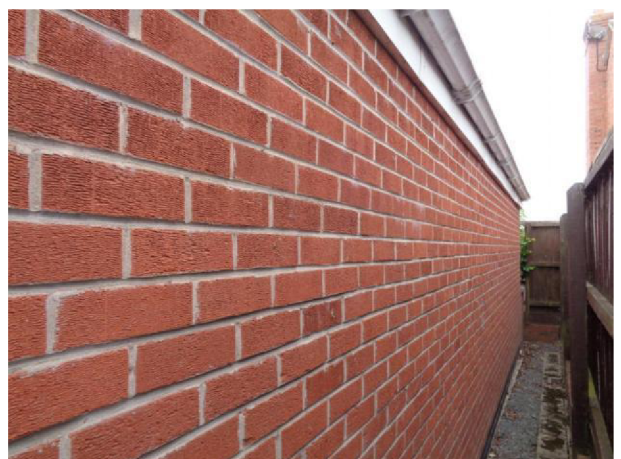
The northern aspect of the offices is bare brick. In the gable end there is an air brick and below this there is a vent. Landscaping ornamental shrubs grow at the base of this aspect. The verge mortar is in very good condition. The southern aspect is an internal wall in the in-use offices.

The eastern aspect of the offices is a bare brick wall, with a gutter mounted on a tightly fitting plastic fascia board. The western aspect of the offices has bare brick walls, with a composite door and double uPVC doors which have uPVC floor to ceiling windows on each side. Over the western aspect there is an overhang of the roof.

The roof is of interlocking concrete tiles, and these and the ridge tiles are in good condition. The chimney stack which marks the limit of the site is bare brick with lead flashing.



North aspect of offices



Eastern aspect of offices

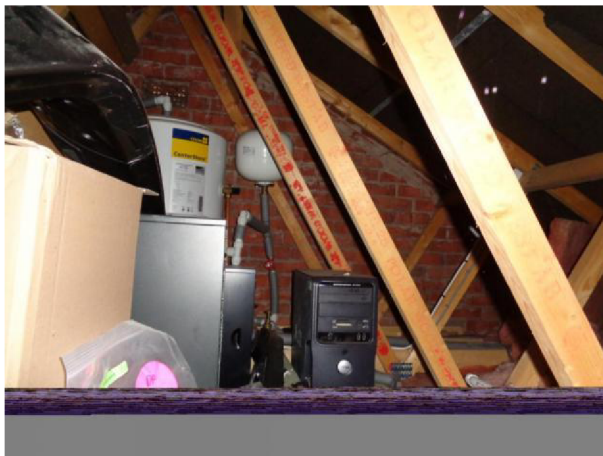


Western aspect of offices



Western aspect of offices

The roof void of the offices inspected extends from the northern end wall south to the fire wall where the flue stands. The roof tiles are underlined with felt. There is insulation and the floor is partly boarded. There are small chinks of light at the western eaves where the overhang occurs. The roof void is full of equipment and files.



Roof void of offices



Roof void of offices

Outside the offices and to the north of the offices along the site boundary fence there are beds of ornamental landscaping shrubs.



Landscaping shrubs

No invasive alien plants, as defined by Schedule 9 of the Wildlife & Countryside Act (1981 and as amended) were seen on the site. NBN had no records of invasive alien plants for the site or immediate area. There was a record of giant hogweed in the general vicinity of the site but it was from an undefined area of land, and not from the site.

The site has no statutory nature conservation designation and no such site is immediately adjacent. The nearest statutory nature conservation site is Ashby Canal Site of Special Scientific Interest (SSSI), of which the nearest part to the site is c1.2km south-west, across built land and farmland. This SSSI is of interest for its aquatic and emergent plant communities of the canal's nutrient-rich water. The Church Cottage site falls within the impact risk zone for this SSSI.

As shown by Figure 5.5 (Biodiversity Assets) of the Hinckley & Bosworth Green Infrastructure Strategy report (July 2020), the site has no non-statutory nature conservation designation, and no such site is immediately adjacent.

Hinckley & Bosworth Council had no planning information for the property or adjacent or nearby properties or land for which there was any ecology information.

3.3 Protected Species

Badgers

No badger setts or signs of use by badgers were seen on the site. NBN and LRERC had no records of badgers for the site.

Otter, water vole & white-clawed crayfish

The site has no open water habitats and so these species will not occur. No open water habitats are adjacent.

NBN had no records of these species for the site or immediate area, and the only otter record was from an unspecified area of farmland from 2007. LRERC had no records of water vole or crayfish for the site or immediate area, and the only otter record was from the River Sence from 2008 and this is c1km south.

Barn owl and other birds

The site's buildings and built structures are not suitable for use by barn owls for nesting or roosting. The site has no trees which barn owls could use and no long rough grass habitats which could be used by barn owls which are nesting or roosting elsewhere for hunting over.

NBN had only unlocated records of barn owls from 2004-06 from areas of farmland in the vicinity of Carlton and nearby villages. LRERC had a few records of barn owls, from farmland around the village to the south-west, south-east, west and north-west.

The site has very limited habitats which could be used by other birds for nesting in, this being just the beds of ornamental shrubs. No signs of birds nesting in the roof voids of Church Cottage and the offices were seen. Birds recorded at the time of the surveys were swallow, woodpigeon and house sparrow.

Reptiles

No reptiles were seen and it is considered that the site would not support common reptiles (ie grass snake, common lizard, adder and slow worm) since the habitats are not suitable, being dominated by buildings and hardstandings.

NBN had no records of adder for the site or immediate area. There was one record of common lizard from 2000 from an unspecified site; two records of slow-worms from 1988 and 1995 again from unspecified sites; and records of grass snakes from unspecified sites although there was one record of grass snake from a locality very close to the village and to the west of the site. LRERC had no adder or slow-worm records and it had the same lizard record as NBN, placing it c300m south-west of the site in farmland. LRERC had several grass snake records, from the period 1999 to 2004, with the sightings being from localities c50-560m from the site, including from gardens.

Great crested newts

The site has no pond or other area of open standing water which could be used for breeding in by great crested newts. Breeding great crested newts will therefore not occur at this site.

The site has very limited habitat which great crested newts could potentially use in the terrestrial phase of their life cycle for sheltering, hibernating and foraging, with this just being the ground under the denser areas of landscaping shrubs.

To address the potential of whether newts are sheltering on and foraging over parts of the site, it is necessary to consider whether there are any nearby off-site ponds which could be suitable for newts and then assess the likelihood of newts dispersing to reach the site. Newts can disperse away from breeding ponds in suitable terrestrial habitats and it has been shown by Natural England research work on capture of newts away from breeding ponds (which can be used as a measure of dispersal) that newts very rarely disperse over c150-200m from breeding ponds given suitable habitats around and away from the breeding ponds. Searches of maps, aerial photographs, other sources and field inspections were made for ponds within c500m radius of the site which could potentially be used by newts.

The result was that several ponds were found, as follows:

- Pond 1: a pond c330m south-west of the site near the edge of a large field and on the eastern side of a public right of way. Aerial photographs show this field to be arable land with no pond visible
- Pond 2: a pond near Bosworth Mill on the east side of Barton Road and over 500m from the site. This pond was not seen
- Pond 3: a second pond near Bosworth Mill on the east side of Barton Road and over 500m from the site. This pond was not seen

- Pond 4: a large pond with an island on north side of Main Street near the east end of the village and behind the properties lining the street; c275m north-east of the site. Aerial photographs show this pond to be present. This pond was not seen
- Pond 5: a small pond close to the above and c350m north-east from the site. Aerial photographs show this pond to be present. This pond was not seen
- Pond 6: a pond in a hedgeline between Bottle Neck woodland and Knowles Spinney, and c235m south-east from the site. Aerial photographs show that this pond is still possibly present. This pond was not seen
- Pond 7: a pond in a hedgeline leading north from Knowles Spinney towards Main Street and c240m east of the site. Aerial photographs show that this pond has gone under houses and gardens
- Pond 8: a large pond in an angle of Bottle Neck woodland and c215m south of the site. This pond appears on aerial photographs but not maps. This pond was seen
- Pond 9: a small pond in the triangular grass paddock on north side of Main Street more or less opposite the site, and c90m north. This pond does not appear on aerial photographs. This pond was not seen

Added to the above is the pond (called “gcn pond”) on the north side of Main Street which is the source of a May 2009 female great crested newt record (held on LRERC). This pond does not appear on maps and is therefore considered to be a small garden pond. It is c200m north-east from the site. Aerial photographs are unclear. This pond was not seen.

Overall, it is considered that even if great crested newts occur in one or more of the above ponds, they would not disperse to reach the Church Cottage site, on account of the distance between some of the ponds and the site; the sub-optimal habitats which occur between some ponds and the site (eg extensive mown grass, built land, hardstandings); the presence adjacent to or near to some of the ponds of ideal newt habitat (eg woodland) such that newts would preferentially disperse into this rather than disperse further to reach the site; and the presence of obstacles to newt movement (eg buildings, walls along road frontages and between gardens).

NBN had no records of great crested newts for the site or immediate area, beyond a 2009 record from an unspecified site in the countryside around Carlton. LERC only had the May 2009 record mentioned above. The MAGIC web site shows that no great crested newt survey data or licence returns occur in the vicinity of the site.

Bats

Church Cottage

The inspection of the exterior of Church Cottage found no bat droppings on walls, windows, window sills, etc, which shows that these buildings have had no close use by bats, which often produce droppings upon leaving and entering roosts.

The part of the roof void of Church Cottage which was able to be inspected is considered to be of negligible bat roosting potential, according to the terms of the categorisation of potential bat roosts as given in the Bat Conservation Trust’s 2016 Good Survey Guidelines. This conclusion has been drawn on account of the many gaps between the tiles which would make the roof void draughty and relatively well lit, the

presence of extensive cobwebs, and of the covering of everything in the roof void by fine dusty debris. No bat droppings or other signs of use by bats were seen.

It is not known what the eastern third of the roof void of Church Cottage is like, between the fire wall and the eastern end wall, since there was no access. It is considered likely that it is identical to the western part but this remains an unknown quantity. Therefore, the bat roosting potential of the eastern part of the roof void has been assessed as being of low bat roosting potential according to the terms of the categorisation of potential bat roosts as given in the Bat Conservation Trust's 2016 Good Survey Guidelines.

Therefore, and in keeping with the guidelines, in order to resolve the potential bat roosting issue at the eastern end of Church Cottage roof void, one dusk bat emergence survey was undertaken, concentrating on the eastern part of the roof void. This was undertaken on 3 August 2022 using Bat Box Duet and Echo Meter Touch 2 Pro bat detectors. The observers were stationed to the rear of Church Cottage with good sight of the roof against the sky. The observers were Tim Smith and Denise Smith, both of whom have extensive experience of bat emergence and activity surveys at residential, commercial, ecclesiastical and industrial buildings, and at undeveloped greenfield sites and watercourses.

The survey was undertaken from 20.45 to 22.15, with sunset at 20.55. The conditions were suitable for bat activity, being warm (21C at 20.30 and 18C at 22.00); dry; still to a gentle breeze; lightly overcast; and flying insects were present.

It was noted that an LED streetlight was located on the north side of Main Street, a very short distance west of Church Cottage, and this came on at c21.13, and it very well illuminated the north and western aspects of the cottage, casting strong shadows. A second LED streetlight was located on the north side of Main Street slightly further west (which came on at c21.16), and an LED streetlight was attached to a telegraph pole on the south side of Main Street a short distance east (which came on at c21.18). Neither of these two lights illuminated the cottage. The rear of the cottage was quite dark until a very bright security light on the gable end of the adjacent house came on, which illuminated the rear quite well with strong shadows.



Front of Church Cottage at night



Rear of Church Cottage at night

No bats were seen or heard to emerge from the roof of Church Cottage.

There was commuting and foraging activity by common pipistrelle bats along Main Street, around the gardens of the dwellings roughly opposite on the north side of the road, around the paddock opposite the cottage on the north side of the road, and around the barns next to the paddock. This started at c21.21, which was c26 minutes after sunset, and continued occasionally until the end of the survey at 22.15. On a very few occasions there was foraging activity by common pipistrelles at the rear of the cottage and over the access off Main Street.

The conclusion is drawn that bats are not roosting in Church Cottage.

Offices

The inspection of the exterior of the offices found no bat droppings on walls, windows, window sills, etc, which shows that these buildings have had no close use by bats, which often produce droppings upon leaving and entering roosts.

No bat droppings or other signs of bats use were seen in the roof void of the northern part of the offices. The roof void has been assessed as being of negligible bat roosting potential. It was not possible to inspect the narrow gap which exists between the tiles and their underlining, and this feature has been assessed as being of low bat roosting potential according to the terms of the categorisation of potential bat roosts as given in the Bat Conservation Trust's 2016 Good Survey Guidelines.

Therefore, and in keeping with the guidelines, in order to resolve the potential bat roosting issue at the offices, one dusk bat emergence survey was undertaken, concentrating on the northern part of the roof. This was undertaken on 18 August 2022, using Bat Box Duet and Echo Meter Touch 2 Pro bat detectors. The observers were stationed to the west of the offices with good sight of the roof against the sky.

The observers were Tim Smith and Denise Smith, both of whom have extensive experience of bat emergence and activity surveys at residential, commercial, ecclesiastical and industrial buildings, and at undeveloped greenfield sites and watercourses.

The survey was undertaken from 20.10 to 22.00 with sunset at 20.26. The conditions were suitable for bat activity, being warm (21C at 20.00 and 19C at 22.00); dry; gentle breeze; heavily overcast; and flying insects were present.

The LED streetlight noted on 3 August came on but did not affect the survey of the offices, since they are set too far back from the road. The front of the offices had four outside lights which came on c20.26 but they were of low intensity. The very bright security light on the gable end of the adjacent house came on later, and illuminated the front of the offices quite well.

No bats were seen or heard to emerge from the roof of the offices.

In the survey period of 20.10 to 22.00 there was very little activity by common pipistrelles in the vicinity of the offices, the adjacent yard and gardens. Activity was

noted at 21.00, 21.03, 21.17, 21.18 and 21.27. The first common pipistrelle activity was c34 minutes after sunset.

The conclusion is drawn that bats are not roosting in the offices.

Although completely unrelated to the offices and Church Cottage, the 18 August survey noted a lot of activity by noctule bats during the roughly first half hour of the survey, from 20.29 to 21.03. A noctule bat was seen high above the village and well to the south-east of the site at 20.43, and registrations on the bat detectors were noted at 20.29 to 20.36, 20.40, 20.43, 20.48, 20.49, 20.52, 20.54, 20.59 & 21.03. It is suspected that one or more noctule bats had emerged from tree roosts in either or both of Bottle Neck woodland and Knowles Spinney and were foraging over the woodlands and grassland on the south side of Main Street, east of the Church Cottage site.

Existing bat records

NBN only had one record of each of brown long-eared bat and pipistrelle bat, and both were from the west end of the village, with no records from the site. LRERC had records of unidentified bats, brown long-eared bats, *Myotis* species of bat, common pipistrelles and pipistrelle species of bats. The records were from the period 2009 to 2019, and were of foraging or commuting bats, grounded bats, roosts and droppings. Some of the records were from the west end of the village; some from at and near the east end; and some were from a locality c1km south. The closest records to the site were c200m distant and there were no records from the site itself.

Other species

The site has virtually no habitat which could be used by hedgehogs for sheltering and foraging, just the small areas of landscaping ornamental shrubs. NBN had records of hedgehogs in the general area of Carlton village.

4 Assessment of nature conservation importance

4.1 Site habitats and plants

The habitats of the site are not of nature conservation importance, since they are buildings, hardstandings, a small garden which is mostly lawn and landscaping ornamental shrubs. These are common and widespread artificial habitats.

None of the plants recorded are of nature conservation significance since they are all common and widespread species of disturbed ground and grassland. No rare or scarce plants occur. No invasive alien plants occur.

4.2 Protected species

The site is not of significance for badger, otter, water vole, white-clawed crayfish, barn owl, other birds, reptiles, breeding or sheltering great crested newt or hedgehogs.

The site is not of significance for roosting bats. The dusk emergence surveys at the offices and at Church Cottage have showed that there is limited commuting and

foraging over the site by common pipistrelle bats, which occurs as an integral part of the activity by common pipistrelles which mostly takes place over the habitats to the north of the road. The level of foraging and commuting is not of significant interest.

5 Potential ecology constraints

5.1 Site habitats and plants

There are no constraints to the proposed development of this site from habitats or plants species, including invasive aliens.

No statutory or non-statutory nature conservation site would be affected by the development of this site.

Although the development site falls within the Impact Risk Zone for Ashby Canal SSSI (of which the nearest part is c1.2km south-west), the development is of a small scale and it is isolated from the statutory nature conservation site by distance across built land and farmland, such that it is considered that there would be no impact on the SSSI.

5.2 Protected species

There are no constraints to the proposed development from badger, otter, water vole, white-clawed crayfish, barn owl, reptiles, hedgehogs, or breeding or sheltering great crested newt.

Roosting and foraging-commuting bats are not a constraint to proposed development.

Nesting birds are a potential ecology constraint since the development will require the removal of potential bird nesting habitat, and active nests could be damaged or lost if clearance work is undertaken during the nesting season. All wild birds are protected under the Wildlife and Countryside Act (1981 and as amended) and the 2000 Countryside & Rights of Way Act. This legislation makes it illegal, both intentionally and recklessly to do the following: to kill, injure or take any wild bird; to take, damage or destroy the nest of any wild bird while it is being built or in use; to take or destroy the eggs of any wild bird; and possess or control any wild bird or egg unless obtained legally.

The constraint however only applies during the bird breeding season, which is roughly March to August inclusive. Nesting birds are not a constraint outside the breeding season ie September to February inclusive. Clearance of potential nesting habitat outside the bird nesting season would remove this potential constraint.

6 Mitigation and enhancements

6.1 Site habitats and plants

No mitigation or enhancements are required for habitats.

No mitigation or enhancements required for plants, including invasive aliens.

6.2 Protected species

No mitigation or enhancements are required for badger, otter, water vole, white-clawed crayfish, barn owl, reptiles, hedgehogs, or breeding or sheltering great crested newt.

No mitigation is required for roosting or foraging-commuting bats. An enhancement for roosting bats could be to provide one or more standard commercially available bat roosting boxes, which are likely to be used by common pipistrelles, which could be attached to off-site nearby buildings or trees.

Standard mitigation for nesting birds would be necessary but only if habitats which could potentially be used by nesting birds are needed to be removed during the bird breeding season. This would comprise the undertaking of prior inspections of the habitats to be removed to ensure that no active birds' nests were present, and undertaking a watching brief whilst work progresses. If any were found, they would have to be marked and buffer zones established, and work would have to take place elsewhere or be temporarily suspended, until the young birds have fledged and left the nest, and after making sure that no other brood is established.

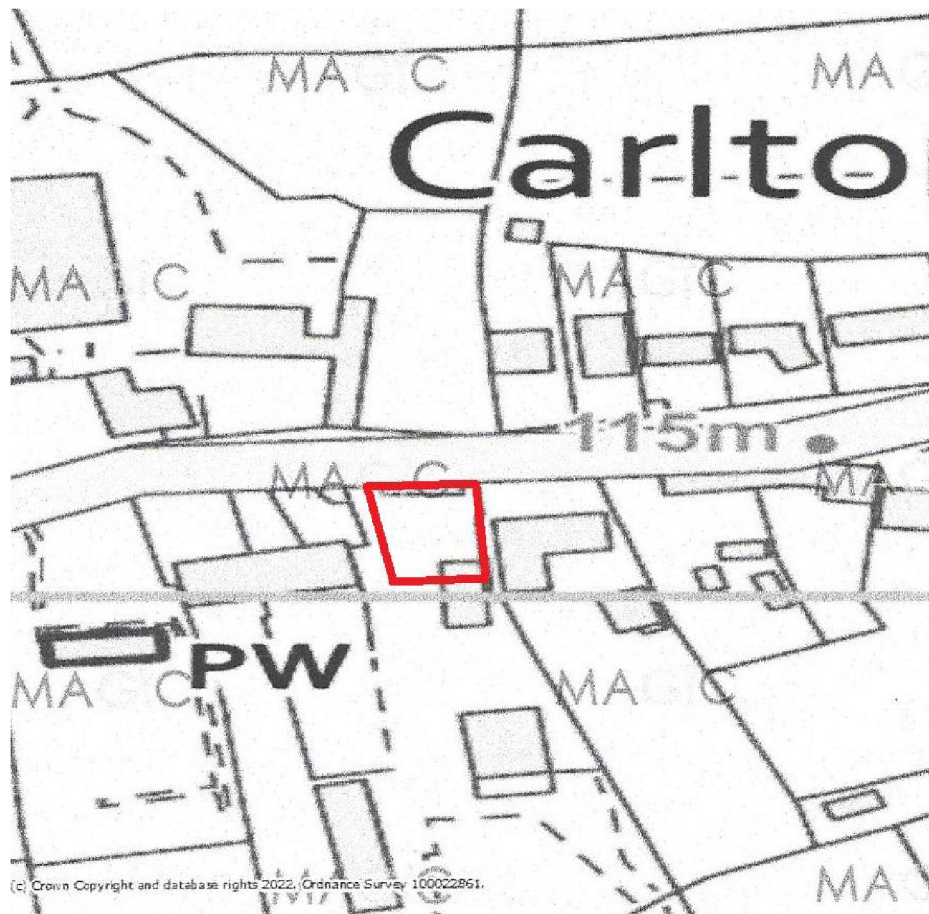
The easiest approach is to remove the potential bird nesting habitat outside the bird breeding season since no mitigation would then be needed.



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Appendix 1: site location



Appendix 2: sketch habitat map

